

**OFFICIAL COORDINATION REQUEST FOR
NON-ROUTINE OPERATIONS AND MAINTENANCE**

COORDINATION TITLE- 23BON003 MOC T11 Outage
COORDINATION DATE- 12 January 2023
PROJECT- Bonneville Lock & Dam
RESPONSE DATE- 9 February 2023

Description of the problem:

Bonneville Lock & Dam's Powerhouse Two (PH2) requires regularly planned T11 (U11-14) transformer maintenance. This work is scheduled to start on 05 September and continue through 25 September 2023. This operation will require Units 11, 12, 13, and 14 to remain out of service (OOS) for the duration of work. This outage has been coordinated for the timeframe of 05 to 25 September with the intention of minimizing impacts on fish, unit priority order, and spill.

Transformer maintenance is specialized work that it requires a dry environment. The goal of working in September is to minimize the likelihood of disruption due to wet weather conditions.

Type of outage required: The T11 outage will take four units (U11-14) OOS.

Impact on facility operation (FPP deviations): The project will have only four main units available at PH2. F1 and F2 will remain in criteria so there will be no impact to fishway criteria.

Impact on unit priority: Units 11-14 will out OOS.

Current FPP Unit Priority Order Criteria (BON 4.1, Table BON-13):

PH2: 11, 18, 12, 17, 13, 14, 15, 16

PH1: 1, 10, 3, 6, 9, 4, 5, 8, 7, 2

During T11 Outage:

PH2: 18, 17, 15, 16

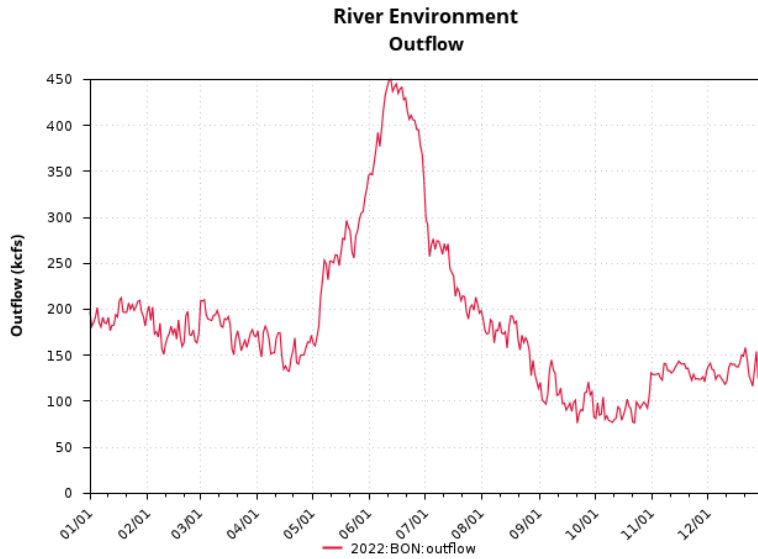
PH1: 1, 10, 3, 6, 9, 4, 5, 8, 7, 2

Impact on forebay/tailwater operation: None

Impact on spill: Summer Spill operations end at 2359 on 31 August, the spillway will remain available for use. No other units are currently expected to be OOS.

Dates of impacts/repairs: 05 to 25 September

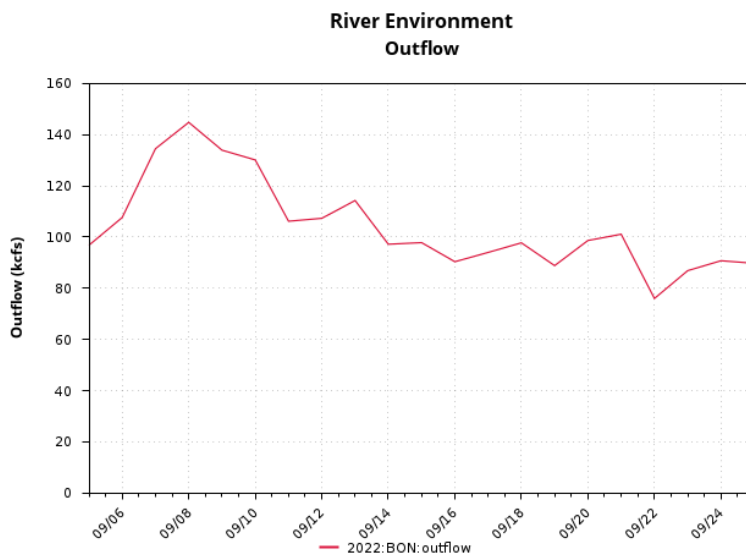
Length of time for repairs: 20 days



www.cbr.washington.edu/dart

10 Jan 2023 15:50:00 PST

Figure 1. 10-year average outflow data during fish passage season at Bonneville. (Obtained from Columbia Basin Research, DART)



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10 Jan 2023 15:49:16 PST

Figure 2. Detailed 10-year average outflow data for Bonneville during the planned dates of the T11 outage. (Obtained from Columbia Basin Research, DART)

Analysis of potential impacts to fish

1. 10-year average passage by run during the period of impact for adults and juvenile listed species, as appropriate for the proposed action and time of year:

2022 fish passage and 10-year average fish passage data (Obtained from Columbia Basin Research, DART):

Table 1. Fish passage numbers by date from 2018 - 2022

Date	2018	2019	2020	2021	2022
5-Sep	11258	14244	19764	26282	35859
6-Sep	11167	10472	16930	21471	29619
7-Sep	7263	7455	11905	23615	29249
8-Sep	9090	10160	25725	21550	41656
9-Sep	6647	10085	19761	15346	47195
10-Sep	7229	4505	18150	14439	35547
11-Sep	11105	8447	16005	15459	37653
12-Sep	7957	19452	14331	16940	31535
13-Sep	6054	25625	14875	15141	19047
14-Sep	4031	18027	17837	17626	17866
15-Sep	7299	10077	13736	15543	24750
16-Sep	5058	12653	20567	12352	17495
17-Sep	8920	9472	13431	12355	16908
18-Sep	3310	14752	18243	8683	14354
19-Sep	3253	8707	11083	11062	12538
20-Sep	5811	9551	9951	10492	9765
21-Sep	9272	7524	13915	8720	10554
22-Sep	6598	9575	8425	11669	8912
23-Sep	5283	9938	7202	10218	7487
24-Sep	8339	6161	9596	10365	4980
25-Sep	6607	7511	4776	8247	5508

2. Statement about the current year's run (e.g., higher or lower than 10-year average):

Table 2. Previous year's (2022) Run vs 10-Year Average (Obtained from Columbia Basin Research, DART)

Fall Chinook	Similar to 10-year average
Sockeye	Well Above 10-year average
Coho	Above 10-year average
Steelhead	Below 10-year average

3. Estimated exposure to impact by species and age class (i.e., number or percentage of run exposed to an impact by the action):

Table 4. 10-year average totals for the timeframe of outage vs 10-year average run totals. (Obtained from Columbia Basin Research, DART)

	5-25 Sep 10 Year Average	10-Year Total Run Average	Percentage of Run Affected
Fall Chinook	294081	715315	41.1%
Steelhead	34265	173873	19.7%
Sockeye	6	300662	0%
Coho	48610	103213	47.1%
Lamprey	624	48936	1.3%
Sub-Yearling Chinook	1507	3641668	0%

Summary statement - expected impacts on:

Downstream migrants: Predominate juvenile species during this period is sub-yearling Chinook. Downstream migrants will not likely be attracted to the DSM though units 11-14 as there will be no flow through the units to attract them into those gatewells. Units 15-18 will remain in FPP criteria and will provide a downstream passage route.

Upstream migrants (including Bull Trout): All fishways will remain in FPP criteria. There should be very little impact to any upstream migrating fish.

Lamprey: Minimal. 1.3% of lamprey migration traditionally occurs during the timeframe of this outage. All LPSs will be fully functional.

Comments from agencies

230209 FPOM –

23BON003 MOC T11 Outage. Lorz would prefer to not have the outage but regular maintenance has to occur. Dry weather is important for safety. Conder doesn't want to agree to a T11 outage until the ITS is back in operation. Transformer work hasn't occurred in the winter, it usually occurs in the summer. FPOM would like more time to consider the outage and the impacts.

WDFW – -----Original Message-----

From: Morrill, Charles (DFW) <Charles.Morrill@dfw.wa.gov>
Sent: Friday, January 27, 2023 1:22 PM
To: Mackey, Tammy M CIV USARMY CENWP (USA)
<Tammy.M.Mackey@usace.army.mil>
Subject: [Non-DoD Source] RE: Official Coordination: FPOM 23BON003 MOC T11 outage

Hi Tammy,

Given that this work needs to be completed in dry weather and prior discussions have not identified any viable options that I'm aware of ... I will listen to the discussion at FPOM and support the consensus of our co-managers.

Have a gr8 weekend ;-)

Charlie

Final coordination results

230309 FPOM - 23BON003 MOC T11 Outage. Conder asked if the ITS would be at full operation. The trashracks will be in 1A and 1B and the ITS. FPOM concurs with this outage.

After Action update

Please email or call with questions or concerns.

Thank you,

Tammy Mackey

Columbia River Coordinator

503-961-5733

Tammy.m.mackey@usace.army.mil